

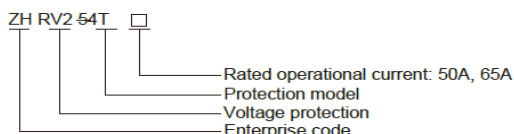
ZHRV2-54T

Operating Instruction of ZHRV2-54T Digital Household Self-resetting Overvoltage and under voltage Protector

Functions and features

- High-performance microcontroller, with high reliability and interference rejection capability.
- LED Nixie tube displaying the operating voltage value.
- Featuring over voltage and under voltage protective function.
- User can set the protection parameters by using the buttons.
- Voltage measuring accuracy $\leq 1\%$.
- Measuring frequency: 45Hz-65Hz.
- It can be installed on standard rail 35mm.

Model and meaning



Main technical parameters

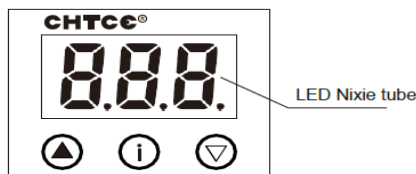
Rated supply voltage	AC220V
Rated operational voltage	AC100V~400V
Rated supply frequency	50/60Hz
Overvoltage actuation time	0.1s
Under voltage actuation time	120~200V, 1s <120V, <0.1s
Voltage lagged value	5V
Voltage measuring error	$\leq 1\%$ (entire setting range)
Delay error	$\pm 10\% \pm 0.1s$
Measuring accuracy	1%, true virtual value measurement
Rated insulation voltage	415V
Model and maximum rating of short circuit protector	NT00-6A
Protection class	IP20
Pollution level	3
Electrical life	10^5
Mechanical life	10^6
Altitude	$\leq 2000m$
Operating ambient temperature	$-5^{\circ}C \sim 40^{\circ}C$
Permissible relative humidity	$\leq 50\%$ ($40^{\circ}C$) (without condensation)
Storage temperature	$-25^{\circ}C \sim 55^{\circ}C$

Technical parameters	Setting range	Stepping amount	Factory set value
Overvoltage operating value	210V~280V	1V	250V
Under voltage operating value	120V~200V	1V	170V
Break over delay time	5s~600s	5s	15s

Current specification	50A	65A
Rated operating current	50A	65A
Maximum operating current (within 10min)	63A	80A
Rated operating frequency	11kW	13.9kW
Maximum cross-section of conductor	16mm ²	16mm ²

Operating instructions of button menu

Panel schematic diagram



Button explanation

- ▲ Setting of overvoltage operating value/digit+ button
- i Confirm modification button
- ▼ Setting of under voltage operating value/digit- button

Example

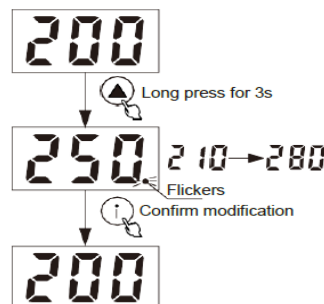
Break over delay display



- Operating voltage value of LED Nixie tube flickers during break over delay; operating voltage value of LED Nixie tube will be normally on after delay is over and output relay is with break over.

Setting of overvoltage operating value

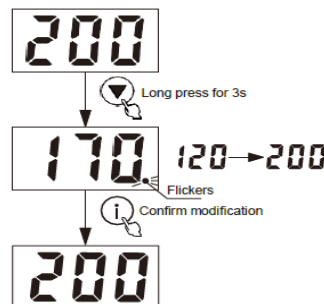
Long press ▲ For 3s to enter setting interface of under voltage operating



- The rightmost indication point flickers after entering overvoltage setting interface.
- It can change the setting value by pressing ▼ ▲
- The relay will automatically quit the menu and not save the modified data if not operating the button for continuous 60s during setting parameters.

Setting of under voltage operating value

Long press ▼ For 3s to enter setting interface of under voltage operating



- The rightmost indication point flickers after entering under voltage setting interface.
- It can change the setting value by pressing ▼ ▲
- The relay will automatically quit the menu and not save the modified data if not operating the button for continuous 60s during setting parameters.

BRANCH CONTACT DETAILS

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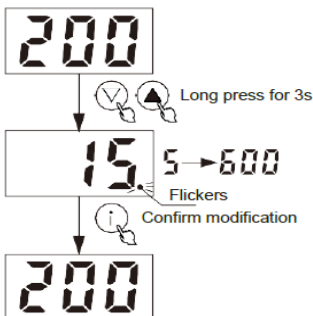
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Setting of break over delay time

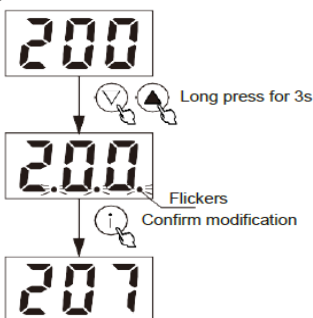
Long press both For 3s to enter setting interface of break over delay



- The rightmost indication point flickers after entering setting interface of break over delay time.
- It can change the setting value by pressing .
- The relay will automatically quit the menu and not save the modified data if not operating the button for continuous 60s during setting parameters.

Voltage value calibration

Long press both For 3s to enter voltage value calibration interface before the relay is



- The three indication points flicker after entering voltage value calibration interface.
- It can change the setting value by pressing .
- The relay will automatically quit the menu and not save the modified data if not operating the button for continuous 60s during setting parameters.

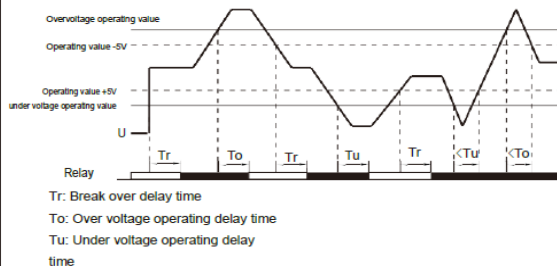
Operating instructions

- If there is voltage fault while power on after the break over delay of relay completes, the output relay will not operate.
- LED Nixie tube will display the operating voltage value after the relay normally operates.

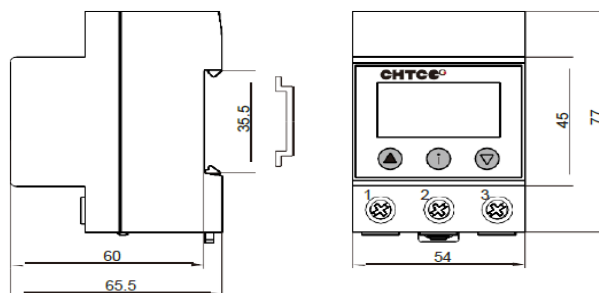
Precautions

1. The installation, operation and overhaul of this product shall be carried out by a professional. The product warranty period is 18 months under regular service condition.
2. The user is prohibited to take apart or maintain the product regardless of whether the product is normal or damaged, otherwise our company will not assume any liability for any accident caused.
3. Please refer to the wiring diagram for wiring.
4. Power incoming line is prohibited for wiring in the same tube with other electric wires of strong current. And please use shielded wire if necessary to avoid interference and influencing the normal operation of the protector.
5. It is prohibited to use the product in places with dustiness, corrosive gas, direct sunlight or rain.
6. The product is prohibited to be used in medium with explosion hazard, which medium shall not contain corroding metal, gas destroying insulation and conducting dust.
7. Please store and use the product under rated supply voltage and the stipulated temperature, altitude and humidity.

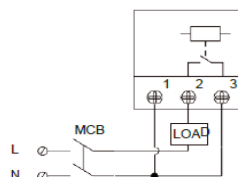
Function sequence diagram



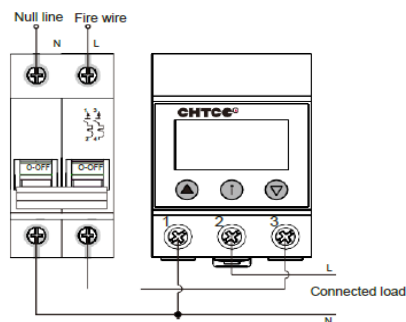
Shape and dimension



Electrical diagram



Wiring diagram



- Rated operating current of circuit breaker is 75% maximum current of voltage relay.
 $I_e = 0.75 I_{max}$

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